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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,914	03/23/2004	Masahiro Ikeda	0941.70144	3878

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EXAMINER

NGUYEN, THANH NHAN P

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/806,914

Applicant(s)

IKEDA ET AL.

Examiner

(Nancy) Thanh-Nhan P. Nguyen

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,5-10,13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10,13 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 5-7, 9, 10, 13 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (admission) in view of Shimada et al (US 5,910,829) and Ono et al (US 2005/0083471).

Regarding claims 1 & 2, Admission discloses a liquid crystal display (LCD) panel, comprising a display area (202) for displaying images, and a frame area (204) that surrounds the display area, wherein the frame area comprises: a transparent substrate (206), a first electrode (210) that counters the color filters, a second electrode (216) that counters the first electrode, and liquid crystal that is inserted between the first electrode and the second electrode, [see fig. 6].

Admission lacks disclosure of the frame area comprises a plurality of color filters provided side-by-side on the transparent substrate, each of the color filters filtering one of at least two predetermined colors; wherein each of the color filters is one of red, green, and blue colors.

Shimada et al discloses in the frame area, a plurality of color filters provided side-by-side on the transparent substrate, each of the color filters filtering one of at least two predetermined colors; wherein each of the color filters is one of red, green, and blue

colors, [see fig. 15], for the benefit of preventing the coloring of light through the light blocking layer from occurring, [see col. 20, lines 59-62]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have a plurality of color filters provided side-by-side on the transparent substrate in the frame area, each of the color filters filtering one of at least two predetermined colors; wherein each of the color filters is one of red, green, and blue colors for the benefit of preventing the coloring of light through the light blocking layer from occurring.

Admission further lacks disclosure of wherein the first electrode and the second electrode are connected to a common voltage, and wherein liquid crystal display panel is a normally-black liquid crystal panel.

It was well known that the normally black condition, which generates a black display in a state in which an electric field is not applied to the liquid crystal, or there is no electrical potential difference between the first electrode (said pixel electrode) and the second electrode (said common electrode); or voltages applied to the first electrode and the second electrode are the same; or the first electrode and the second electrode having/connecting to a common voltage, as evidenced by Ono et al, [see par. 0204], for the benefit of achieving black display in the desired area and being possible to strengthen the function of blocking light as black matrix. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the first electrode and the second electrode are connected to a common voltage, and wherein liquid crystal display panel is a normally-black liquid crystal panel for the

benefit of achieving black display in the desired area and being possible to strengthen the function of blocking light as black matrix.

Regarding claim 5, Admission lacks disclosure of wherein thickness of the color filters in the frame area is equal to thickness of a plurality of color filters in the display area.

Shimada et al discloses wherein thickness of the color filters in the frame area is equal to thickness of a plurality of color filters in the display area, [see fig. 15], for the benefit of having no adverse effect due to the thickness variation which is present when the light blocking layer is formed of two layers of different colors, [col. 18, lines 55-57]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to form the thickness of the color filters in the frame area is equal to thickness of a plurality of color filters in the display area for the benefit of having no adverse effect due to the thickness variation which is present when the light blocking layer is formed of two layers of different colors.

Regarding claim 6, Admission discloses wherein a transparent protective coat is provided between the color filters and the first electrode, [see fig. 6].

Regarding claim 7, Admission discloses wherein a spacer member (222) for regulating the thickness of the LCD panel is provided in the frame area, [see fig. 6].

Claims 9 & 10 are met the discussion regarding claim 1 rejection above.

Claim 13 is met the discussion regarding claims 9 & 2 rejection above.

Claim14 is met the discussion regarding claims 10 & 2 rejection above.

Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (admission) in view of Shimada et al and Ono et al as discussed above, and further in view of Matsuoka et al (US 6,348,958).

Regarding claim 8, Admission lacks disclosure of an area occupancy ratio of the color filters in one color is different from an area occupancy ratio of the color filters in another color.

Matsuoka et al discloses an area occupancy ratio of the color filters in one color is different from an area occupancy ratio of the color filters in another color, [fig. 1], for the benefit of being possible to omit the step of manufacturing a black mask so as to reduce the cost; and consequently, a color filter for an optical display device can be provided with an excellent appearance on a display, [see abstract]. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have an area occupancy ratio of the color filters in one color is different from an area occupancy ratio of the color filters in another color for the benefit of being possible to omit the step of manufacturing a black mask so as to reduce the cost; and consequently, a color filter for an optical display device can be provided with an excellent appearance on a display.

Response to Arguments

Applicant's arguments filed 7/21/2006 have been fully considered but they are not persuasive. Therefore, the rejection in previous office action has been maintained.

Applicants' argument: On the Remarks, pages 5 and 6, as to Ono reference, applicant's argued for the first pixel electrode and the second pixel

electrode are formed on the same substrate at the same level; there is a gap between first opposing electrode and second opposing electrode, and therefore the liquid crystal display device does not provide "permanent" black representation as in the frame area; further, the construction in Ono reference is not for the frame area but for the display area.

Examiner's answer: As explaining in previous office action, page 3, in order to have normally black, which generates a black display, either the electric field is not applied, or the voltages applied to the first and second electrodes the same, or the first and second electrodes connected to a common voltage. That was very well known in the art. Using Ono reference, Examiner would like to have the evidence why people used normally black (in order to achieve black display in the desired area and strengthen the function of blocking light). Therefore, achieving normally black in either display area or frame area would not be a problem to one ordinary skilled in the art. Position of the two electrodes (which used to receive common voltage) would not be a problem as well. The main thing is to get normally black condition for the display device.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P. Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen

Examiner
Art Unit 2871

TN



David Nelms
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